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- $\begin{array}{l} AA<\underline{R3>>\$2+\#9!} d < 9! \texttt{!} \texttt{0}>AA>\texttt{DEHE}>k9! \texttt{T} < 9! \texttt{h} ! \texttt{8} 2 \& 1\$9! <!0A6A6P<\texttt{; I } \texttt{e} \texttt{8} \texttt{I} : !\$\#! d \& \#*3\#! \texttt{E}/++1(\texttt{f}!) \\ W\&. '+\texttt{H}(*\texttt{E}/+1+?\$\texttt{E}\texttt{3}1!\texttt{3}\#2!=(*\texttt{E}/+\&2.\texttt{E}\texttt{3})\$+\#31!\texttt{I}\texttt{G}\texttt{H}\$\texttt{E}\texttt{3})\$+\#(<!) \end{array}$

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- $\begin{array}{l} @7< ! \mathbf{0} > \mathbf{AA} > \mathbf{DEHD} > 9! T < 9! \underline{\mathbf{R}} > > \$ 2 + \# k \\ 9! d < 9! : '3 & \& 9! ; < 9! h \\ 1 + 2' \$ ? & \& g \\ 9! L < 10A64MP < !L + GH3' \$ (+ \# !+, !) / \&! & ) \\ = ; X! 3 \# 2! L [ -B : !, + '!2 \& H' \& ((\$ + \# !(E' \& \& \# \$ \# ?!3G + \# ?!*+ .) / !^{\$}) / ! ; I \\ 456B455 < !/ ))H(fee 2 + \$ < + '?e46 < 464Ne < 32 < A64M < 6@ < 6A@ ! \\ \end{array}$
- @M< <u>J\*##</u>k9!L&!`'321&\*Bd1.?9!d&!**!O>AA>DE**HE>9!T&!-><!Y+/#!U31(/9!8&!:&2'\$E\_9!]&!h!]+2'\$?.&g9!L<! 0A64CP<!K&#)31!/&31)/!(E'&&#\$#?!\$#!\$#)&?'3)&2!E3'&!(&))\$#?(f!I2&#)\$,\*\$#?!'3)&(!+,!2&H'&((\$+#9!3#Z\$&)\*9! 3#2!H+())'3.G3)\$E!()'&((!3G+#?!\*+.)/!^\$)/!;I\<! 0@P9! A@MBA5D<!/))H(fee2+\$<+'?e46<46C6e4D@C4D64<A64C<45@7DCD!
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- $54 < -) <!Y + / #! U 31(/k9! 8 < 0! U & (1&*9! d 0! T3#9! \langle V 0! J * ##9! L 0! S a J & 3'*9! d 0! U 3#?9! V 0! W? . * & #9! : 0!$  $! 0>AA>DEHD>9! T 0! h ! ] + '$? . & g9! L <!0A647P <! - E' & & #$ #?! , + '!2 & H' & (($+#!3G+#?!*+.)/!^$)/!; I \ !$ #!$ \$#) & ?'3) & 2!E3' & !(&)) & #?(<! AM07P9! CD4BCD7 <! /)) H(fee2 + & + '?e46 < 46C6e!6MD564A4 < A647 <! AC4C7C!
- 5A< **! 0>AA>DEED>**k9!T<!0A647P<!0+'G3)\$%&!;I\!'&(&3'E/!3G+#?!\*+.)/!\$#!d&#\*3f!0\$#2\$#?(!,'+G!3! H(\*E/+(+E\$31!#&&2(!3((&((G&#)<! 0@P9!55@B55M ! /))H(fee2+\$<+'?e46<464Ne!0<03#3<A64N<44<665!
- $5 @< IO > AA > DEH > k9!T < 9! K < 9! ) < !Y + /#! U < 31(/9! 8 < 9! ] + 2' ? . & g9! L < 9! h ! [GG3#. & 19! = <!0A647P <! K & 2$E3) + #! < 2 / & ' & #E&! #! < @B!) + !A5B & 3'B + 12! + . ) / !1 % #?!^$) / !; I < !$

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- 5D< <u>Y&# \$#(k9!-@!!</u> **0>AA>DE**HD>9!T@!h!-31#3\$)\$(9!L<!0A647P<!8'&!H&&'!(H&E\$31\$()(!/3HH\*q!;+^!)'3\$#\$#?!3#2! '+1&!E13'\$)\*!3,,&E)!0+>!(3)\$(,3E)\$+#<! /))H(fee2+\$<+'?e46<46@7eH'06666ADM!
- 5N< **! 0>AA>DEHE>K9**!**T**<sup>.9</sup>!**h** !-)<!**Y**+/#!**U**31(/9!8<-<!0A64NP<!**8**!**G**\$#2,.1!'3)\$+#31!1\$%\$#?!3HH'+3E/!,+'!322'&((\$#?!;**I** \ !\$#!)/&!(E/++1!(&))\$#?<!

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- $\begin{aligned} & \text{NM} < \frac{-\&'H3(k9! : \langle \mathbf{R} \triangleleft | \mathbf{R} 3 \rangle > \$2 + \#9! \, d \triangleleft ! ! \mathbf{0} \rangle \mathbf{A} \mathbf{A} \rangle \mathbf{D} \mathbf{E} \mathbf{H} > 9! \mathbf{T} \triangleleft ! \mathbf{h} ! 31\$\#3(\mathsf{B} \mathbf{K} \$' 3\#239! \, \mathsf{8} < \mathsf{8} < !0\mathsf{A} \mathsf{6} \mathsf{A} \mathsf{A} \mathsf{P} < !03G\$! *9! \\ & \#\&\$?/> + '/++29! 3\#2! \mathsf{E} + \mathbf{G} \mathbf{G} . \#\$) *!(. \mathsf{H} \mathsf{H} + ')(!\$\#! \mathsf{H} + \mathbf{G} + )\$\#?!\$2\&\%\&1 + \mathsf{H} \mathbf{G} \&\#)! 3\mathbf{G} + \#?! \, \mathbf{J} \, \mathbf{R} \ \mathbf{T} \mathbf{X} ! * + .)/! + ,! \\ & \mathsf{E} + 1 + ' <!\mathbf{I} \#! \ <!; \ 31 \mathsf{H} \&' \#\mathsf{B} \mathsf{O} \&1(/\&'! \, \mathsf{h} \, ! \, \mathbf{K} < \mathsf{8} < ! \, \mathbf{K} + '\&\# + !0 \, [2(\mathsf{P}! \ \mathsf{O} \mathsf{A}^{\mathsf{FO}}! \, [2\$)\$ + \#\mathsf{P} \, ! \, [1(\&\%\&\&' <! \mathsf{R} \ \mathsf{S} \ \mathsf{S}$
- 76< ] +2'\$?. &gk9! J <K ⟨9!` &1)'3#9! \ ⟨9! h ! ! 0>AA>DEHD>9!T<!0A6A6P<!I#)\$G3)&!H3')#&'!%\$+1&#E&!\$#!E+11&?&!</p>
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- $$\begin{split} & \sum_{13189} | d \circ ! U 31_& '9! [ \circ !L'++_9! d \circ ! `+' (39! ` \circ !W?+9! O \circ ! ] & \#\#+!-3\#) + (9! K \circ ! ! 0 > AA > DEHE>9! T \circ !h ! ] & 29! Y < ! 8 < !0A6A59! K 3 'E/P <! S = TIS W f! 8 #!3#31*($(!+,!%E)$G!% .1#&'3>$1$)*!H'+,$1&(!,'+G!3!01+'$23B>3(&29! *+.)/!)'3, $E_$#?!(H&E$31)*!E+.') <! 1=3#&1!H'&(&#)3)$+#m<! 8 E32&G*!+,!L'$G$#31!Y.()$E&!-E$&#E&(9! L/$E3?+9!I11$#+$(<!$$
- N< **! 0>AA>DEHI>**9!T<!0A6A59!K3'E/P<!I2&#)\$,\*\$#?!3#2!'&(H+#2\$#?!)+!&)/\$E31!2\$1&GG3(!1L+#)\$#.\$#?! [2.E3)\$+#!U+'\_(/+H

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  (&'%\$E&!.H)3\_&!)+!'\$(\_!>&/3%\$+'!)'&#2(<!=+()&'!H'&(&#)&2!3)!)/&!S,,\$E&!+,!=+H.13)\$+#!8,,3\$'(!T\$)1&!r!<br/>
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- 4N< **! 0>AA>DEHD>9**!**T**<9!`\$131\$9!d<9!O'3#E\$(9!**R**<9!**h**!]+2'\$?.&g9!L<8<!0A6A@9!Y.#&P<!=(\*E/+(+E\$31!(E'&&#\$#?!+,! \*+.)/!1\$%\$#?!^\$)/!;**I**\!\$#!3#!\$#)&?'3)&2!E3'&!(&))\$#?!>&,+'&!3#2!3,)&'!LS \**I**:B4M<!=+()&'!H'&(&#)&2!3)! )/&!8**I**:-!**I**GH3E)!L+#,&'&#E&<!-)+E\_/+1G9!-^&2&#<!

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 $3)!)/\&! & \##. 31!L + \#\&\#) + \#!+, !)/\&!I\#) \&'\#3) \\ & \#31! & BI : -!- + E\&) &'(K + \#)' & 319!X . \&>\&E9!L3\#323 \\ AM < !O>AA>DEED>9!T < 9! & A>2+ \#9! & 0 < 9! : '3&?&'9! & 0!-3) \\ E/\&'9! & K < 9! & L'+G&2*9! & K < 9! & 1! \\ & H & 1.3H+>& 3\#E+9!Y < !OA6AA9! \\ & Y . 1*P < ! \\ \end{array}$ 

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 $=+()\&'!H'\&(\&\#)\&2!3)!)/\&!''\#\$)\&2!-)3)\&(!03G\$1*!3#2!V+.)/!-\&'\%\&E\&(!`.'\&3.a(!):82+1\&(E\&\#)!='\&?#3#E*!='\&\%\&\#)\$+\#!R'3\#)\&\&!L+\#,\&'\&\#E\&(!\setminus\$').3]<$ 

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 $@A \le = 1 \& 9! Y @! - 3 # g 9! Y @! h ! ! 0 > AA > DEHI> 9! T <! 0A6AA9! 0 &> ' . 3 ' * P <!$ 

!=+()&'!H'&(&#)&2!3)!)/&!8##.31!L+#%&#)\$+#!+,!)/&!W3)\$+#31!8((+E\$3)\$+#!+,!

 $= \frac{1}{(234)} + \frac{1}{(234)}$  $56 \le 0 > AA > DEHI > 9! T < 9! h! - E / ^3' gBK &) & 9! ] < 0.066A69! 8. ?. ()P <!$ =3H&'!H'&(&#)&2!3)!)/&!8##.31!L+#&&#)\$+#!+,!)/&!8G&'\$E3#!=(\*E/+1+?  $E31! 8 ((+E)3) + #<! \ ). 31<!$ 54< **! 0>AA>DE**!!**>**9!**T**<9!-E/^3')**9**9!**Y**<9!**J**3#?,+'29!**L**<9! : &(3\$9!**8**<9!**h**!**8#2'**&^(9!**Y**<!0A6A69!**8**.?.()P<! <! - \*GH+(\$. G!H'&(&#)&2!3)!)/&! 8##.31!L+#%&#)\$+#!+,!)/&!8G&'\$E3#!=(\*E/+1+?\$E31!8((+E\$3)\$+#9!\\$').31<! 5A < 0 > AA > DEm > 9!T < 9! : '3 & 9! ; <math>0!R3 > 2+#k! d < 9!L3' + 9!8 < 9!h! + 2' ? . & g9!L < 0.06A < 69!8 . ? . ()P<!=+()&'!H'&(&#)&2!3)!)/&!W3)\$+#31!] \*3#!U /\$)&!L+#,&'&#E&!+#!; I \ !L3'&!3#2!T'&3)G&#)<! \ \$').31<!  $5@ < L3' + 9! 8 < 9! ! 0 > AA > DEHI> 9! T < 9! : '3_&9! ; < 9! h! ] + 2' ? . & g9! L < !0A6A69! 8 . ? . ()P <!$ <!=+()&'!H'&(&#)&2!3)!)/&! W3)\$+#31!] \*3#!U /\$)&!L+#,&'&#E&!+#!; I \ !L3'&!3#2!T'&3)G&#)<! \ \$').31<!  $55 < = \&1\&((9!T\circ!! 0 > AA > DEIII) > L!T\circ!!R3 > \$2 + #9!d\circ!!h! \$ <!8##.31!L+#%&#)\$+#!+,!)/&! -+.)/&3()&'#!=(\*E/+1+?\$E31!8((+E\$3)\$+#<!W&^!S'1&3#(9!J8<!0E+#,&'&#E&!E3#E&1&2!2.&!)+!LS \ I:B4Mt! +#1\$#&!'&H+(\$)+'\*!3%3\$13>1&P 5D< **! 0>AA>DEHI>**9!T<!0A64M9!8.?.()P<! ; +)!T+H\$E(!\$#![)/\$E(!-\*GH+(\$.G!E/3\$'&2!>\*! )/&!8=8![)/\$E(!L+GG\$)&!3!)/&!8##.3!!L+#&#)\$+#!+,!)/&!8G&'\$E3#!=(\*E/+1+?\$E3!!8((+E\$3)\$+#<!))L/SE3?+9!IJ<!!5N< **! 0>AA>DE**=>9!T<9!: '3\_&9!; 9!R3>>\$2+#9!d<9!]+2'\$?.&g9!L<8<9!h!;\$?/)+^BU&\$2G3#9!J<!0A64M9! 8.?.()P<! =+()&'!H'&(&#)&2!3)!)/&!8##.31!L+#%&#)\$+#!+,!)/&!8G&'\$E3#!=(\*E/+1+?\$E31!  $8((+E\$3)\$+\#<!L/\$E3?+9!IJ!0]\&E\&\$\&\&2!-+E\$\&)*!,+'!;\&31)/!=(*E/+1+?*a(!S.)()3#2\$#?!=+()\&'!8^3'2P<!!$ 57< : '3\_&9!; @! **! 0>AA>DEHI>**9!T<9! h ! ] +2'\$?. &g9! J<!0A64M9! K 3'E/P<! =+()&'!H'&(&#)&2!3)!)/&!8##.31!L+#%&#)\$+#!+,!)/&!I#)&'#3)\$+#3!!8((+E\$3)\$+#!,+'!=(\*E/+1+?\$E31!-E\$&#E&<!=3'\$(9!O'3#E&< 5C< **! 0>AA>DEIII>**9!T<br/>/9!R3>>\$2+#9!d<br/>/9!: '3 &9!; <br/>/9!L3'\$+9!8<br/>/9!K&'\$239!K<br/>/9!h!]+2'\$?.&g9!L<8<br/>(!0A64C9! : &E&G > &'P <!<!=+()&'!H'&(&#)&2!3)!)/&!W3)\$+#3!!]\*3#!U/\$)&!L+#,&'&#E&!+#!;I\!L3'&!3#2!  $T'\&3)G\&\#(1^{3})$ 5M< : '3\_&9!; @! ! 0>AA>DEHI>9!T@!]+2'\$?.&g9!J@!h!=&1&((9!T<!0A64C9!Y.1\*P<! =+()&'!H'&(&#)&2!3)!)/&!I#)&'#3)\$+#31!8I: -!-+E\$&)\*!L+#,&'&#E&9!8G()&'23G<!D6< J\*##9!L9! **! 0>AA>DE (**] ' 321&\*Bd1. ?9!d9!-)(!Y+/#!U31(/9!8<!: &2'\$E\_9!]9!: '3\_&9!; 9!h! ]+2'\$?.&g9!L<!0A64C9!Y.1\*P<! <!=+()&'!H'&(&#)&2!3)!)/&!I#)&'#3)\$+#31!8I: -!-+E\$&)\*!L+#,&'&#E&9! 8G()&'23G<! 1  $D4 < J * ##9!L9! > 321\& *Bd1. ?9!d0! - ) <!Y + / #!U31(/9!80!L/& ##& $11&9!T0! : & 2'&E_9! ]0!h! ] + 2' ?. & g9!L <!$ 0A64C9!8H'\$1P<! <!=+()&'!H'&(&#)&2!3)!)/&!-+E&)\*!+,!=&2&3)'E!=(\*E/+1+?\*!8##.31!L+#,&'&#E&<!S'13#2+9!01+'\$23<! ١ 1

(( ND< KEL'3E\_&#9!Y<9! h ! **! 0>AA>DE**HD>9!T<!0A64@9!Y.#&P<!

MA< **! 0>AA>DEHI>**9!**T**<! **h** ! **K** 311&'9! - <!04MMM9! 8 H '\$1P! !!=3H&'!H'&(&#)&2!3)!)/&!8##.31!W3)\$+#3!!8((+E\$3)\$+#!+,!-E/++1!=(\*E/+1+?\$()(!L+#%&#)\$+#9!J3(! \ &?3(9!W&%323<!! M@< **! 0>AA>DEHI>**9!T<! h ! K 3#?\$+#&9!L<!04MMC9!W+%&G>&'P! <!!=3H&'!H'&(&#)&2!3)!)/&!8##.3!!J+.\$(\$3#3!-E/++1!=(\*E/+1+?\$E31! 8((+E\$3)\$+#!L+#,&'&#E&9!J3,3\*&))&9!J+.\$(\$3#3<!!M5< ! **0>AA>DEHI>**9!T<!04MMC9!8.?.()P! <!! =+()&'!H'&(&#)&2!3)!)/&!465)/!8##.31!8G&'\$E3#!=(\*E/+1+?\$E31!8((+E\$3)\$+#!L+#,&'&#E&9!-3#! 0'3#E\$(E+9!L31\$,+'#\$3<!!!! MD < ! 0 > AA > DEHI > 9!T <! h ! K 311& '9! - <Y <! 04MMC9! 8 . ? . ()P!<!!=+()&'!H'&(&#)&2!3)!)/&!465)/!8##.31!8G&'\$E3#!=(\*E/+1+?\$E31!8((+E\$3)\$+#! L+#,&'&#E&9!-3#!0'3#E\$(E+9!L31\$,+'#\$3<!!!! MN< **! 0>AA>DEHI>**9!T<8<!04MM79!W+%&G>&'P! <!!=+()&'! H'((#)(23))/(4A5)/(8#)(1+32)(4+3)`&3E/9!01+'\$23<!!!' M7< **! 0>AA>DEHI>**9!**T**<8<!04MM79!Y.#&P! !!=3H&'!H'&(&#)&2!3)!)/&!N)/!8##.31!01+'\$23!; I \ !L+#,&'&#E&9!S '13#2+9! 01+'\$23<!!! MC < d#+...9! : < K < 9! h ! ! 0 > AA > DEH > 9! T < 8 < !04MM79! 8 H ' \$1P!!-\*GH+(\$.G!E/3\$'&2!3)!)/&!8##.31! W3)\$+#3!!8((+E\$3)\$+#!+,!-E/++1!=(\*E/+1+?\$()(!L+#%&#)\$+#9!8#3/&\$G9!L31\$,+'#\$3<!!! MM < d#+, 9! ; <K < 9! h ! ! 0 > AA > DEHE > 9! T < 8 < !04 MMN 9! W + % & G > & 'P!!=3H&'!H'&(&#)&2!3)!)/&!A@'2!8##.31!01+'\$23!8((+E\$3)\$+#!+,!-E/++1! =(\*E/+1+?\$()(!L+#,&'&#E&9!0)<!J3.2&'231&9!01+'\$23<!!!  $466 = +^{1} (118 - G) / 9! d < 8 < 9! 0 > AA > DEHE>9! T < 9! h ! 0 & 23 9! K < 104MM9! W + & G > & P!$ !!=3H&'!H'&(&#)&2!3)!)/&!A@'2!8##.31!01+'\$23!8((+E\$3)\$+#!+,!-E/++1! =(\*E/+1+?)((!L+#,&'&#E&9!0)<!J3.2&'231&9!01+'\$23<!!!464< **! 0>AA>DEHI>9!T**<8<!04MMN9!Y.1\*P! !!=3H&'!H'&(&#)&2!3)!)/&!4MMN! 8 ## . 31!I#)&'#3)\$+#31!-E/++1!=(\*E/+1+?\*!8((+E\$3)\$+#! L+11+j.\$.G9![?&'9!;.#?3'\*<!!0=3H&'!E/+(&#!3(!+#&!)/3)!u>&()!'&H'&(&#)&2!\$##+%3)&&'H'3E)&(v!\$#!)/&!\$\$ 518''#\$!#''3''-1.1'+-30%C-&'1'') E./:30%F+#:38+<30%.-) G.''31%H''21, #''3%1 **! 0>AA>DE**=9!T<!0A6A59!Y.1\*P<![)/\$E31!L+#(\$2&'3)\$+#(!,+'!=(\*E/+1+?\$()(!U+' \$#?!\$#!L+''&E)\$+#31! 46A< O3E\$1\$)\$&(f!J&3'#\$#?!,'+G!I#)&?'3)&2!L3'&!-&))\$#?(<!1L+#)\$#.\$#?![2.E3)\$+#!U+' (/+Hm<!O&2&'3!! `.'&3.!+,!='\$(+#(<!\\$').31<!  $46@ < U_3(\{1\&^{(1)}, -\emptyset]; .\#)\&'9! [\emptyset] ! 0 > AA > DEHE > 9! T \emptyset!; 3. ?9! W \emptyset! h!; 3'()\&'9! d <!0A6A@ 9!: & E&G > &'P <! 0 > AA > DEHE > 9! T \emptyset!; 3'()&'9! d <!0A6A@ 9!: & E&G > &'P <! 0 > AA > DEHE > 9! T \emptyset!; 3'()&'9! d <!0A6A@ 9!: & E&G > &'P <! 0 > AA > DEHE > 9! T \emptyset!; 3'()&'9! d <!0A6A@ 9!: & E&G > &'P <! 0 > AA > DEHE > 9! T \emptyset!; 3'()&'9! d <!0A6A@ 9!: & E&G > &'P <! 0 > AA > DEHE > 9! T \emptyset!; 3'()&'9! d <!0A6A@ 9!: & E&G > &'P <! 0 > AA > DEHE > 9! T \emptyset!; 3'()&'9! d <!0A6A@ 9!: & E&G > &'P <! 0 > AA > DEHE > 9! T \emptyset!; 3'()&'9! d <!0A6A@ 9!: & E&G > &'P <! 0 > AA > DEHE > 9! T \emptyset!; 3'()&'9! d <!0A6A@ 9!: & E&G > &'P <! 0 > AA > DEHE > 9! T \emptyset!; 3'()&'9! d <!0A6A@ 9!: & E&G > &'P <! 0 > AA > DEHE > 9! T \emptyset!; 3'()&'9! d <!0A6A@ 9!: & E&G > &'P <! 0 > AA > DEHE > 9! T \emptyset!; 3'()&'9! d <!0A6A@ 9!: & E&G > &'P <! 0 > AA > DEHE > 9! T \emptyset!; 3'()&'9! d <!0A6A@ 9!: & E&G > &'P <! 0 > AA > DEHE > 9! T Ø!; 3'()&'9! d <!0A6A@ 9!: & E&G > &'P <! 0 > AA > DEHE > 9! T Ø!; 3'()&'9! d <!0A6A@ 9!: & E&G > &'P <! 0 > AA > DEHE > 9! T Ø!; 3'()&'9! d <!0A6A@ 9!: & E&G > &'P <! 0 > AA > DEHE > 9! T Ø!; 3'()&'9! d <!0A6A@ 9!: & E&G > &'P <! 0 > AA > DEHE > 9! T Ø!; 3'()&'9! d <!0A6A@ 9!: & E&G > &'P <! 0 > AA > DEHE > 9! T Ø!; 3'()&'9! d <!0A6A@ 9!: & E&G > &'P <! 0 > AA > DEHE > 9! T Ø!; 3'()&'9! d <!0A6A@ 9!: & E&G > &'P <! 0 > AA > DEHE > 9! T Ø!; 3'()&'9! d <!0A6A@ 9!: & E&G > &'P <! 0 > AA > DEHE > 9! T Ø!; 3'()&'9! d <!0A6A@ 9!: & E&G > &'P <! 0 > AA > DEHE > 9! T Ø!; 3'()&'9! d <!0A6A@ 9!: & E&G > &'P <! 0 > AA > DEHE > 9! T Ø!; 3'()&'9! d <!0A6A@ 9!: & E&G > &'P <! 0 > AA > DEHE > 0! T Ø!; 3'()&'9! d <!0A6A@ 9!: &'P <! 0A6A@ 9!: &'P <! 0A6A@ 9!: &'P <! 0A6A@ 9! &'P <! 0A6$  $R'_{32.3}().2 \#)! / E(!^') #(!+GH_{0})) + !! + M'_{11} * ... + !! A * ... +$ 

 $(1) \\ (1)$ 

- ((
- 46N< **! 0>AA>DE** #>9!T<!0A6A@9!8H'\$IP<!0'+G!'\$(\_!)+!'&(\$1\$&#E&f!T'3.G3B\$#,+'G&2!E3'&!,+'!\*+.)/!^\$)/! ; I \ <!I#%\$)&2!T31\_<!81>3#\*!K&2\$E31!L&#)&'!-H&E\$31\$g&2!L3'&!L&#)&'!,+'!82+1&(E&#)(!3#2!V+.#?! 82.1)(!A6A@!T&3E/\$#?!:3\*<!\\$').31<!!
- $\begin{array}{l} 467 < \underline{: 3(\_\&))} ! K \oslash ! \underline{J} & 323 \\ \underline{J} & 333 \\ \underline{J} & 333$
- 46C< **! 0>AA>DEIII>9**!T<!0A6A@9!K3'E/P<!L/311&#?&(9!'&^3'2(9!3#2!(H&E\$31!E+#(\$2&'3)\$+#(!^/&#! E+#2.E)\$#?!'&(&3'E/!^\$)/!3#2!,+'!\*+.)/<!I#%\$)&2!T31\_<!=.>1\$E!;&31)/!SH&#!0+'.G9!"#\$%&'(\$)\*!+,! U\$)^3)&'('3#29!Y+/3##&(>.'?9!-+.)/!8,'\$E3<!
- 46M< **! 0>AA>DEIII>**9!T<!0A6A@9!K3'E/P<!]&(&3'E/!^\$)/!3#2!,+'!\*+.)/f!L/311&#?&(9!'&^3'2(9!3#2!(H&E\$31!) E+#(\$2&'3)\$+#(<!I#%\$)&2!T31\_<!=&'\$#3)31!; I \ !]&(&3'E/!"#\$)9!"#\$%&'(\$)\*!+,!U\$)^3)&'('3#29! Y+/3##&(>.'?9!-+.)/!8, '\$E3<!
- $\begin{array}{l} 444 < \quad ! \ 0 > AA > DEHE > ! T < !0 A GAA9! S E) + > & 'P <! [ ) / $E31! L + #($2&'3)$ + #(!,+'!=(*E/+1+?$()(! U + '_$#?!$#!I#)&?'3)&2! \\ L3'&!-&))$ #?(<!R.&()!!&E).'&!$#!2+E) + '31B1&%&1!; & 31)/!=(*E/+1+?*!E+.'(&!0='+,&((+'f!:$3#3!]3#E+.')9! \\ = / : P9! " #$%&'($)*!+,!-+.)/!01+'$23<!! \\ \end{array}$
- 44A< **! 0>AA>DEIII>9**!T<!0A6AA9!SE)+>&'P<!=(\*E/+(+E\$31!I((.&(!03E\$#?!V+.)/!J\$%\$#?!^\$)/!;I\<!I#%\$)&2! T31\_<!;.G3#!`\$+1+?\*!3#2!;&31)/!-).2\$&(!='+?'3G9!"#\$%&'(\$)\*!+,!T+'+#)+9!S#)3'\$+9!L3#323<!\\$').31<!
- $\begin{array}{l} 44@< ! 0 > AA > DEIII > 9!T < !0A6AA9! &H) &G > & 'P < ! ] &E + ?# $g$#?!3#2!' & (H+#2$#?!)+! &) / $E31!2$1 & GG3(<!I#%$) & 2! \\ T31_<!0+')! U+') / !8' & 3! = (*E/+1+?*!8((+E$3)) + #<! \ $').31<! \\ \end{array}$
- 445< **! 0>AA>DEIII>9**!T<!0A6AA9!0&>'.3'\*P<!:3)3!E+11&E)\$+#f!U/3)9!^/&#9!^/\*9!3#2!/+^q!I#%\$)&2!T31\_<! J [ 8 : -!81!!-)3,, |T'3\$#\$#?<!S'13#2+9!01+'\$23<!!
- 44D< **! 0>AA>DEHE**>9!T<!0A6AA9!0&>'.3'\*P<!; I \ !'&(&3'E/!^\$)/!3#2!,+'!\*+.)/f!L/311&#?&(!3#2!'&^3'2(<! I#%\$)&2!T31\_<!R'32.3)&!: \$H1+G3!='+?'3G!\$#!; &31)/!=(\*E/+1+?\*!-&G\$#3'!-&'\$&(9!V+'\_!"#\$%&'(\$)\*9! T+'+#)+9!S#)3'\$+9!L3#323<! \ \$').31<!!
- 44N< **! 0>AA>DE**=>9!T<!0A6A49!W+%&G>&'P<!=3')#&'\$#?!^\$)/!E+GG.#\$)\$&(!?1+>311\*!3#2!1+E311\*!)+!'&2.E&! ; I \ !()\$?G3!3G+#?!\*+.)/<!I#%\$)&2!T31\_<!J3K3'(/!L&#)'&!,+'!L/\$12!3#2!V+.)/!]&(&3'E/9!V+'\_! "#\$%&'(\$)\*9!T+'+#)+9!S#)3'\$+9!L3#323<!\\$').31<!!
- $\begin{array}{l} 447 < & ! 0 > AA > DEIII > 9!T < !0A6A49!W + %&G > & 'P <! [ ) / & [ ] / & [ ] & (& 3'E / <!R . & () !! & E) . '& ! & #! . #2& '?'32 . 3) & !; +#+'(! = '+(&G & 3'!0='+,&((+'f!Y&##$,&'!L+##+11*9!=/:P <!V+'_! '' #$%&'($)*9!T+'+#)+9!S#)3'$+9!L3#323 <! & ( ) & ) . 3! <! \\ \end{array}$
- $44C < !0>AA>DEIII>9!T<!0A6A49!W+%&G>&'P<!] &(&3'E/!&)/$E(<!R.&()!!&E).'&!$#!.#2&'?'32.3)&!; +#+'(! ='+(&G$#3'!0='+,&((+'f!-.g3##&!K3E:+#3129!=/:P<!V+'_!"#$%&'($)*9!T+'+#)+9!S#)3'$+9!L3#323<$

- ((
- 4D6< **! 0>AA>DEIII>**9!T<!0A64C9! 8 H'\$1P<!=(\*E/+(+E\$31!-E'&&#&'(f! 8 2G\$#\$()'3)\$+#9!-E+'\$#?9!3#2! :+E. G&#)3)\$+#<!!T'3\$#\$#?!H'+%\$2&2!)+!()3,,!\$#!)/&!! "-0!=&2\$3)'\$E!3#2! 8 2+1&(E&#)! : \$(&3(&!='+?'3G<!!
- 4DA< **! 0>AA>DEIII>**9!T<!h!8''\$#?)+#9!Y<!0A64C9!8H'\$1P<!R'+^\$#?!"H!=+(\$)\$%&f!:+E.G&#)3'\*!-E'&&#\$#?! 3#2!:\$(E.((\$+#<!0&()\$%31!+,!-&Z9!"#\$%&'(\$)\*!+,!-+.)/!01+'\$23!-)<!=&)&'(>.'?<!'
- 4D@< **! 0>AA>DEHI>**9!T<!0A64C9!8H'\$IP<!T/&!;I\!-[[](!='+0&E)<!]&(&3'E/!J\$?/)#\$#?!T31\_9!"#\$%&'(\$)\*!+,! -+.)/!01+'\$23!-)<!=&)&'(>.'?<!
- 4D5< **! 0>AA>DE**=>9!T<!0A64C9!0&>'.3'\*P<!K\$#2,.1!]3)\$+#31!J\$%\$#?<!I#%\$)&2!T31\_<!;+#+'(!`'.E/9! "#\$%&'(\$)\*!+,!-+.)/!01+'\$23!-)<!=&)&'(>.'?<!
- 4DD< **! 0>AA>DEIII>9**!T<!0A6479!SE)+>&'P<!T/&!K+'31!=3'32+Z!+,!;I\!L'\$G\$#31\$g3)\$+#!J3^(<!I#%\$)&2! T31\_<! "#\$)3'\$3#! "#\$%&'(31\$()! "#\$)&2!O&11+^(/\$H9!-)<!=&)&'(>. '?9!O1+'\$23<!
- 4DN< **! 0>AA>DEIII>**9!T<!0A6479!Y.1\*P<!; I \ !- [ [ ] (!82%3#E&2!T'3\$#\$#?!U+'\_(/+H<!W3\_.'.9!d&#\*3<!
- 4D7< **! 0>AA>DEHE>**9!T<!0A6479! 8 H'\$1P<! : &%&1+HG&#)31!=(\*E/+H3)/+1+?\*<!R . &()!1&E) . '&!\$#! . #2&'?'32 . 3)&! : &%&1+HG&#)31!=(\*E/+1+?\*!E+. '(&!0='+,&((+'f!U&#2\*!]+)&9!=/:P9! " #\$%&'(\$)\*!+,!-+.)/!01+'\$23!-)<! =&)&'(>. '?<!
- 4DC< **!** 0>AA>DEIII>9!T<!0A6479!8H'\$IP<!U+G&#!\$#!J&32&'(/\$H!3#2!T&E/#+1+?\*<!I#%\$)&2!T31\_<!-E3#B]\$)&! 8 HH!J3.#E/!03HH!E'&3)&2!>\*!.#2&'?'32.3)&!;+#+'(!().2&#)!:&(/3#\$&!R+%&#2&'P!3)!)/&!"#\$%&'(\$)\*!+,! -+.)/!01+'\$23!-)<!=&)&'(>.'?<!
- 4DM< : '3 &9!; <! h ! **! 0>AA>DEHI>**9!T<!103E.1)\*!82%\$(+'m!!0A6479!8H'\$1P<!T/&!&,,&E)!+,!3!H+)&#)\$31!H3')#&'a(! (&'+()3).(!+#!>&/3%\$+'31!(&Z.31!\$#)&#)\$+#(!+,!G&#!^/+!/3%&!(&Z!^\$)/!G&#!+#1\$#&!3#2!+,,1\$#&<!=+()&'! H'&(&#)&2!3)!)/&!"-0-=!]&(&3'E/!-\*GH+(\$.G<!
- 4N6< **! 0>AA>DEm>L'T**<!0A6479! K3'E/P<!-H+)1\$?/)!+#!I#,+'G&2!L+#(&#)!>\*!: &>+'3/!o+&!J3.,&'<!=3#&1\$()! ,+'!E+GG.#\$)\*!,+'.G!3)!8G&'\$E3#!-)3?&9!-)<!=&)&'(>.'?9!01+'\$23<!
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- - ] +2'\$?.&g9!L<!0A64N9!SE)+>&'P<!!: &H'&((\$%&!(\*GH)+G(!'&13)&2!)+!>\$+1+?\$E31!G3'\_&'(!+,!\$GG.#&! ,.#E)\$+#\$#?!3G+#?!\*+.)/!1\$%\$#?!^\$)/!;I\<!=+()&'!H'&(&#)&2!3)!)/&!Y+/#(!;+H\_\$#(!811!L/\$12'&#a(! ;+(H\$)31!]&(&3'E/!-\*GH+(\$.G9!-)<!=&)&'(>.'?9!01+'\$23<!
- $\begin{array}{l} 4N7 < & ! \ 0 > AA > DEHE > 9!T < !0A64N9! S E) + > & 'P < !T / &! ; I \ ! [ [ ] (!='+(\&E)f!_) ? G3B' & 2. E) + #!) / '+ . ? / ! [ 2. E3) + #9! \\ & \_GH+^& 'G & #) 9! 3 # 2! \_ \& (\& 3'E / <!I# \% \&) \& 2!T31_ <! " 0 =! = (*E / +1 + ? & E31! E \& # E \& (!S'?3 # \& g3) + #! \\ & \_L+11+j . \& . G9! ) <! = &) & (>. '?9!01+' & 23 <! \end{array}$
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- 474< **! 0>AA>DEIII>**9!T<!0A64N9!8H'\$IP<!T/&!)'3?&2\*!+,!H&'(+#31!>&1\$&,(<!I#%\$)&2!T31\_<!"#\$)3'\$3#! "#\$%&'(31\$()!"#\$)&2!0&11+^(/\$H9!-)<!=&)&'(>.'?9!01+'\$23<!!

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 $\begin{aligned} & 4CA < \underline{K 3E/3E\&} 9! K < 9! \underline{8?.\$13'9}! [ < 9! \underline{J\$}) | \& 9! T < 9! h ! ! 0 > AA > DEHE> 9! T < 103E. 1) * ! 8 2 < \$ (+'m!0A64D9! 8 H' \$ IP <! \\ & [ & \$31. 3) \$ ? !) / \&! \&, & \& B \\ & \& \# \& ((!+,!3!G\$ + 2, .1!'3) \$ + \# 31! ! \$ \$ \$ ? !H' + ?'3G <!=+() \&' | H' & (\& \#) \& 2! 3) !) / \&! " \# \$ \& '(\$) * ! \\ & +,!-+.) / !01 + '\$23! - ) < != \& ) \&' (>. '?! 8 \# # .31! - ) .2 & \#)! ] \& (\& 3'E/! - *GH + (\$. G9! - ) <!= \&) \&' (>. '?9!01 + '\$23 <!! \\ & 4C@ < \underline{K 3E/3E\&} 9! K < 9! \underline{J\$}) ) \\ & \& 1'T < 9! \underline{L} + 1 \& G 3 \# 9! - 0! h ! ! 0 > AA > DEHE> 9! T <!103E. 1) * ! 8 2 & \$ (+'m!0A64D9! 8 H' \$ IP <! \\ & [ , & E)(!+,!2\$ (\& 3(\&!()3). (!3\# 2!(\& Z. 31! \$ 2\& \#)\$) * ! + \#!H\& 'E\& H)\$ + \# (!+,!H\&' (+\# 31\$) * ! 3\# 2! > \& / 3 & \$ + '! \\ & E/3 '3E) & `\$ () & $E(!3G + \# ?!E + 11 \& ?\&!() . 2 \& \#) (<!=+()\&' !H' & (\& \#) \& 2! 3)!) / \&! " \# \% \&' (\$) * !+,!-+.) / !01 + '\$ 23! - ) <! \\ & = & \& `(>. '?! 8 \# . 31! - ) .2 & \# ! ] \& (\& 3'E/! - *GH + (\$. G9! - ) <! = &) \&' (>. '?9!01 + '\$ 23 <! \end{aligned} \end{aligned}$ 

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- 4MC< **! 0>AA>DEIII>**9!T<!0A6459!K3'E/P<!8 : ; : <!='+,&((\$+#31!2&%&1+HG&#)!H'&(&#)3)\$+#!,+'!G\$221&!3#2! /\$?/!(E/++1!)&3E/&'(!3)!)/&!L3#)&'>. '\*!-E/++1!+,!01+'\$23<!
- $\begin{array}{l} 4\mathsf{MM} < & ! \mbox{0} > \mathbf{AA} > \mathbf{DEHE} > !! \mbox{0} 4 5\mathsf{P} < ! \mbox{0} k < S < ! : $#)g !! (! U 31(/9! 8 <! [ GG3#. & 19! = (! J . ()3#Bo $1 > & 'G3#9!Y <! h ! ] + 2 ' $? . & g9! L <! (0A6459!Y 3# . 3 ' * P <! T / & ! + 1 & ! + , ! 2 & E $($+#31!E3H3E$) *! $#!G & 2 & E3) $+#!32 / & '& #E & !3G + #?! *+ .) / ! \\ & ^ ) / ! ; I \setminus ! = + () & '!H' & (& #) & 2 & !3)! / & ! '' 0! ; I \setminus ! ] & (& 3'E / ! *GH + ($ . G9!T3GH39!01 + '$23 <! \\ \end{array}$
- A66< **! 0>AA>DE** 9!T<!0A645P<! ] [8L; !\*+.)/!().2\*<!R.&()!!&E).'&!\$#!K3()&'a(Bl&%&l!R'32.3)&! ]&(&3'E/! K&)/+2(!\$#!=(\*E/+1+?\*!E+.'(&!0='+,&((+'f!Y&##\$,&'!178Tm/TT21Tf(!)m/TTQ1(!-)-0.2/+2(.\g\$\#\##@F0\#\"C.\$@`,\]

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- A45< **! 0>AA>DEIII>9**!T'9!K &#&g&(9!J'9!R3#?.1\*9!`9!h!=3'G3'9!-<!0A64A9!O&>'.3'\*P<!T'3\$#B)/&!)'3\$#&'! ^+'\_(/+H!+#!)/&!'&(H+#(\$>1&!E+#2.E)!+,!'&(&3'E/<!0+.'B23\*!^+'\_(/+H!/+()&2!>\*!R+%&'#G&#)!

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